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PROGRESS REPORT

Project 6X97-87-001 Clinical Investigations

Task 4, The Natural History of Ventricular
Septal DefectWalter Reed General Hospital
Washington 25, D. C.Department of Medicine
Cardiology Service

1 July, 1961 through 30 June, 1962

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ABSTRACT

PROJECT: 6X97-87-001, Internal Medicine
Task 4, The Natural History of Ventricular Septal Defect
Walter Reed General Hospital, Cardiology Service
1 July 1961 - 30 June 1962
Weldon J. Walker, Col., MC, Robert J. Hall, Lt. Col., MC,
James A. Orbison, Col., MC, Loren F. Parmley, Col., MC,
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There is great difference of medical opinion concerning the natural history of ventricular septal defect. All cardiologists have been impressed with the frequency with which it is encountered in pediatric cardiac clinics and its infrequency in adult cardiac clinics. Some surgeons have argued that this indicates a lethal disease with few patients surviving to adult life; hence, an aggressive surgical policy to close all ventricular septal defects should be pursued. However, beyond the first year of life there are few reported autopsied patients who die from ventricular septal defects. Several reports suggest that some ventricular septal defects spontaneously close: also, that the defect does not increase in size as the heart grows, suggesting that defects may become hemodynamically insignificant with the passage of time.

Since the surgical correction of interventricular septal defect is associated with a rather high mortality in infancy and early childhood, it is imperative to clarify the natural course of the disease, in order to decide whether the present risk of surgical closure is justified in this group of patients.

In this study, all Army Teaching Hospitals are pooling their material to carry out a comprehensive follow-up study on all cases of interventricular septal defect in their files proven by cardiac catheterization prior to 1 January, 1960.

The follow-up includes: present status of health, the number who have died from their disease and the autopsy findings (where available), the number who have had surgical correction, the number who have died incident to surgery, a determination as to whether any have undergone spontaneous closure of their defect, height and weight for plotting growth curves, a determination of cyanosis, etc. In patients who have not had surgery, repeat cardiac catheterization is considered in evaluating the hemodynamic alterations and changes in magnitude of the shunt with the passage of time.

Most Army Teaching hospitals started cardiac catheterizations about 1950. By pooling all available patients from these institutions we should have a significant number of proven cases, with a follow-up period of 1 1/2 to 11 years. It is felt that compiling this information will add to present knowledge concerning the natural course of this congenital defect. The Cardiovascular Research Secretary at the Walter Reed General Hospital will coordinate tracing these patients through Military Locator facilities, follow-up contacts, calls and correspondence, and compile the overall data.

REPORT

Since the study was formally commenced in 1961, the Chief, Cardiology Service at each Army Teaching Center has been attempting to locate patients in his respective files. The criterion for including a patient in the study is: uncomplicated interventricular septal defect proven by catheterization prior to January 1, 1960.

In the past year, the researchers have been:

- a) Attempting to locate patients in their own Clinics and files, in which the diagnosis of interventricular septal defect has been proven by catheterization.
- b) Corresponding and searching to locate the patient/or sponsor, to obtain follow-up health data/and/or autopsy information.
- c) Inviting the patients to come to the Cardiology Centers for reevaluation.
- d) Studying the records and reevaluating the patients and giving consideration to the possibility of surgery. Because of the present availability of better equipment and techniques, this includes patients not formerly considered candidates for surgery.

When all available data (including in some instances reevaluation, recatheterization, and initial or secondary surgery) have been correlated, the principal researchers will complete the 12-page Interventricular Septal Defect Study protocol, which is designed for machine recovery of the data. When a sufficient number of protocols have been completed, these will be forwarded to the Walter Reed Data Processing Division, for recovery of statistics which will be used in writing the report.

While no conclusions or reports have been made, a study of available data has already influenced the thinking of the cardiologists and surgeons concerned, in diagnosing and treating ventricular septal defect. The material has also been informally used in staff conferences, grand rounds, teaching.

Work on this project is proceeding slowly, partly because of the patient-care load of the principal investigators. It is hoped, however, that the assignment to the Walter Reed Army Institute of Research of a cardiologist research fellow will tend to expedite this study in the coming year.